

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

Ex parte MICHAEL WENDELL VICE

Appeal No. 2005-0364  
Application No. 10/072,676

ON BRIEF



Before KRASS, GROSS and BLANKENSHIP, Administrative Patent Judges.

KRASS, Administrative Patent Judge.

Decision On Appeal

This is a decision on appeal from the final rejection of claims 1 and 2. Claims 3-25 have been indicated by the examiner, in the answer (page 2), as being directed to allowable subject matter and no longer form part of the appeal.

The invention relates to a linear, real time control system that acts to remove harmonic and spurious distortion and noise

Appeal No. 2005-0364  
Application No. 10/072,676

from an external source of AC power, best illustrated by reference to independent claim 1, reproduced as follows:

1. A series active power line conditioner, comprising:

an isolation transformer having a primary winding and a first secondary winding, said primary winding for receiving power from a source of alternating current power; and

a feedback control loop comprised of a voltage reference, an output sampler, and an amplifier, said output sampler functioning to provide a scaled sampling of the output voltage of said power line conditioner to a first input of said amplifier, said voltage reference connected to provide a desired voltage to a second input of said amplifier; an output of said amplifier connected to a first terminal of said first secondary winding of said isolation transformer, and a second terminal of said first secondary winding of said isolation transformer connected to an input of said output sampler, said second terminal of said first secondary winding of said isolation transformer also constituting the output of said power line conditioner.

The examiner relies on the following reference:

Estes, Jr. (Estes) 5,013,931 May 7, 1991

Claims 1 and 2 stand rejected under 35 U.S.C. § 102(b) as anticipated by Estes.

Reference is made to the briefs and answer for the respective positions of appellant and the examiner.

OPINION

A rejection for anticipation under section 102 requires that the four corners of a single prior art document describe every element of the claimed invention, either expressly or inherently,

such that a person of ordinary skill in the art could practice the invention without undue experimentation. In re Paulsen, 30 F.3d 1475, 1478-79, 31 USPQ2d 1671, 1673 (Fed. Cir. 1994).

The examiner points to Figure 2 of Estes and contends that there is an isolation transformer (35, [sic, 34]) having a primary winding (on left) and a first secondary winding (on right), with the primary winding receiving power from a source of alternating current (12, 30, 32, 165, and 166). The examiner contends that the remainder of the circuit constitutes a feedback control loop comprised of a voltage reference (ground), an output sampler (136, 138, 140a, 140b, and 168), and an AM amplifier (175), with the output sampler functioning to provide a scaled sampling (138, 140a, 140b sample the output and provide a scaled version thereof) of the output voltage (VOUT) of the power line conditioner to a first input (inverting input, via 168) of the amplifier (175), and the voltage reference (ground) connected to provide a desired voltage (zero volts) to a second input (non-inverting input) of the amplifier (175). The examiner further indicates an output of the amplifier connected (via 167, 138, and 136) to a first terminal (top terminal) of the isolation transformer (34), and a second terminal (bottom terminal) of the first secondary winding of the isolation transformer (34)

Appeal No. 2005-0364  
Application No. 10/072,676

connected to an input (at 140a) of the input sampler, with the second terminal (bottom terminal) of the first secondary winding of the isolation transformer (34) also constituting the output (V<sub>OUT</sub>) of the power line conditioner. The examiner also points out that Estes expressly shows the "first port" (the port at the primary) and the "second port" (the port at the secondary). (See pages 4-5 of the answer).

While appellant argues certain perceived differences regarding structure between Estes and the instant claimed invention, we find the most telling argument to pertain to the claim preamble. Independent claim 1, and therefore, dependent claim 2, recites, in the preamble, a "series active power line conditioner." The preamble of a claim will not limit the scope of a claim when it simply states a purpose or intended use of the invention. Loctite Corp. v. Ultraseal Ltd., 781 F.2d 861, 868, 228 USPQ 90, 94 (Fed. Cir. 1985). The recitation of a "power line conditioner" in the instant claims is more than a mere intended use of the invention because the preamble clearly provides an antecedent basis for certain terms in the body of the claim (note the recitation of "said power line conditioner" on the third line of the paragraph reciting the feedback control loop and at the end of the claim). The power line conditioner of

independent claim 1 includes a circuit having a feedback loop with an output sampler functioning to provide a scaled sampling of the output voltage of the "power line conditioner" to an amplifier input, and the second terminal of the first secondary winding of the isolation transformer constitutes the output of the "power line conditioner."

If a prior art structure is capable of performing the intended use as recited in the preamble, then it meets the claim. In re Schreiber, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997). It was the examiner's burden to show that the circuit structure of Estes is, indeed, capable of performing the function of a power line conditioner.

The reference to Estes is directed to a converter for converting square waves (shown as element 12 in Figures 1 and 2) into triangle waves (shown on the right side of these figures). The reference is not capable of acting as a power line conditioner, as required by the instant claims, and the examiner has nowhere indicated that it may. The examiner does not even address this claim limitation in the statement of rejection appearing in the answer. In the response section of the answer, the examiner addresses this issue very briefly, merely contending that the purpose of Estes is to convert the square wave source

into a triangle wave output by way of a feedback loop and that the artisan "would deem it reasonable to consider this to be power conditioning" (answer-page 8).

We view the examiner's position as interpreting the claim language, "series active power line conditioner" in an unreasonably broad manner. The mere processing, or converting, of a signal does not, in itself, constitute a "power line conditioning" function. Appellant has asserted this term to be well understood by artisans to mean the "removal spectral impurities from an AC power line so as to provide power that is substantially sinusoidal and devoid of harmonic, spurious and random noise components" (reply brief-page 8). To substantiate this claim, appellant has provided evidence in the form of technical journals and technical dictionary definitions, attached to the reply brief as appendices. For example, on the first page of the submission, entitled "Juice From Cans," at the bottom of the third column, it is indicated that power conditioners are "to ensure...purity" of an AC signal. On the first page of a publication by S&VC (Chris Steinwand, author), it is indicated that "in order to be considered a power conditioner in the generally accepted sense of the term, the unit must incorporate surge protection, electromagnetic-interference/radio frequency

interference (EMI/RFI) noise filtering, and voltage regulation." Thus, it appears that there must be some cleaning function, or noise filtering, or the removal of some impurity, in order for a function to be considered a "power conditioner." Conversion of a signal from one type to another is not enough. Even in the Energy Technologies, Inc. Glossary submitted by appellant, a power, or line, conditioner, is defined as "A unit that provides clean, well regulated power. Input and output voltages may also be converted as well." Thus, while a conversion may take place, there must, at a minimum, be some type of cleaning of the input signal.

In view of the evidence provided, and lack of response by the examiner<sup>1</sup> challenging appellant's submitted definition, we accept appellant's definition of a power line conditioner as constituting an element which must "remove spectral impurities from an AC power line so as to provide power that is substantially sinusoidal and devoid of harmonic, spurious and random noise components" (reply brief-page 8) and we interpret the instant claim language to require such. The examiner has not

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<sup>1</sup>The examiner permitted entry of the reply brief without comment so the examiner would be hard-pressed to argue that the examiner had no chance to respond.

Appeal No. 2005-0364  
Application No. 10/072,676

shown any removal of spectral impurities or noise components of an input signal from an AC power line in Estes.

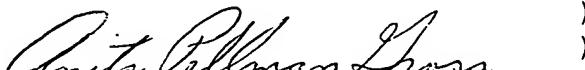
Since the examiner has failed to show that the circuit structure of Estes has the capability of acting as a "power line conditioner," as claimed, we find that Estes does not anticipate the instant claimed subject matter and we will not sustain the rejection of claims 1 and 2 under 35 U.S.C. § 102(b).

The examiner's decision is reversed.

REVERSED



ERROL A. KRASS )  
Administrative Patent Judge )  
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ANITA PELLMAN GROSS )  
Administrative Patent Judge )  
)

BOARD OF PATENT  
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HOWARD B. BLANKENSHIP )  
Administrative Patent Judge )  
)

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Appeal No. 2005-0364  
Application No. 10/072,676

GLENN C. BROWN, PC  
777 NW WALL STREET, SUITE 308  
BEND, OR 97701